

# Tracking NWS Area Forecast Discussions to Study the Subjective Use of Wind and Temperature Profiler Data

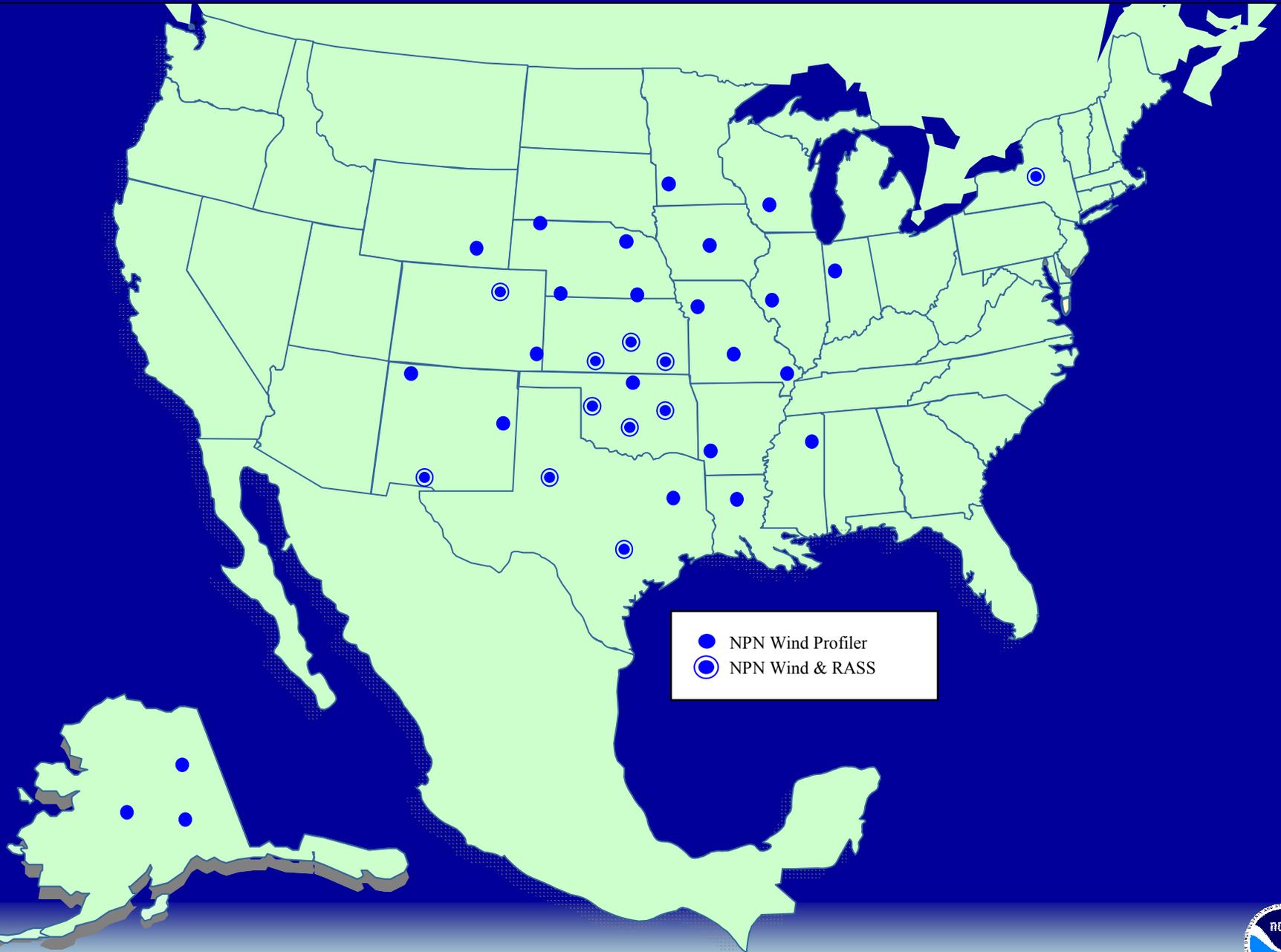
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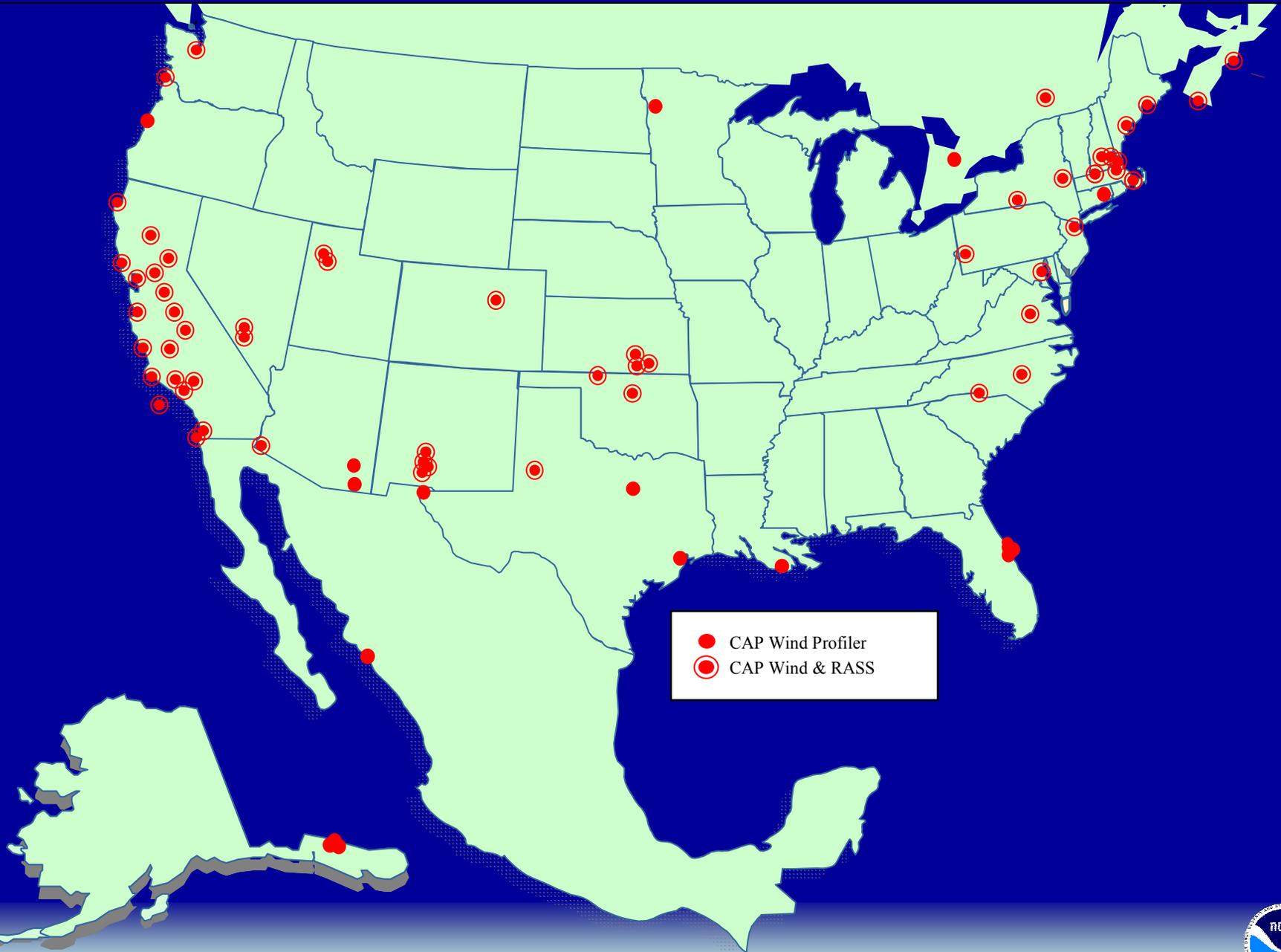
[www.profiler.noaa.gov](http://www.profiler.noaa.gov)



## Locations of NOAA Profiler Network Sites



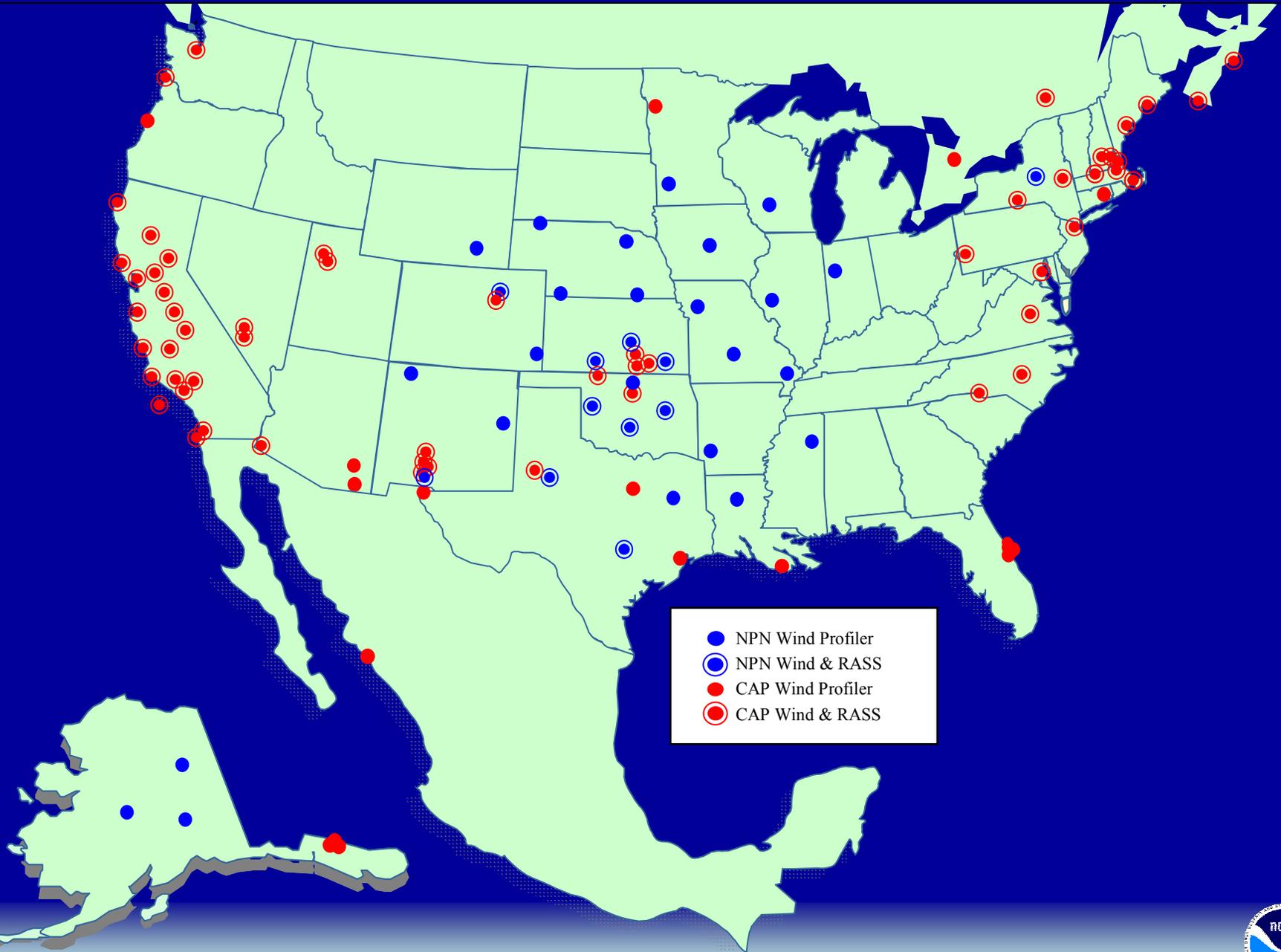
# Locations of Cooperative Agency Profiler Sites



● CAP Wind Profiler  
○ CAP Wind & RASS



# Locations of all known Profilers in the Continental U.S., Canada and Mexico





**AREA FORECAST DISCUSSION**  
**NATIONAL WEATHER SERVICE HASTINGS NEBRASKA**  
**SOUTH CENTRAL NEBRASKA AND NORTH CENTRAL KANSAS**  
**400 AM CDT FRI AUG 8 2003**

"...FORECAST CONCERN THIS CYCLE CONTINUES TO BE TIMING OF PRECIP CHANGES ALONG WITH HIGH TEMPS...

LATEST RADAR SHOWING MCS EDGING INTO SOUTHWEST PART OF CWA...

TWO MCS'S IN PLAY WHEN SHIFT STARTED BUT NORTHERN ONE THAT WAS OVER SOUTHERN SDAK HAS WEAKENED AS PER WARMING IN SATELLITE IMAGERY...

**PROFILER NETWORK** SHOWED SHORTWAVE POSITION IN WESTERN SDAK AND NEB AT 700 MB. **STEERING WINDS AT MCCOOK...** WHICH IS WHERE CONVECTION IS CURRENTLY ONGOING...ARE VERY LIGHT CONFIRMING SLOW MOVEMENT OF STORMS. **COMPARED 500MB PROFILER WINDS** WITH 06Z GFS AND IT LOOKS LIKE MODEL IS OVERDONE WITH STRENGTH OF 500 WAVE TO OUR IMMEDIATE WEST.

HIGHS TODAY SHOULD BE SIMILAR TO YESTERDAY AS...

TIMING OF SHORTWAVES THEN BECOMES FOCUS THROUGH THE EARLY WEEKEND. MCS DEVELOPMENT TONIGHT LOOKS TO GIVE A LITTLE BETTER CHANCE ..."



**AREA FORECAST DISCUSSION**  
**NATIONAL WEATHER SERVICE GRAY/PORTLAND MAINE**  
**SOUTHERN MAINE AND NORTHERN NEW HAMPSHIRE**  
**915 PM EST SUN DEC 14 2003**

“UPDATE...

COLD AND SNOWY WITH NORTHERLY WINDS ACROSS MOST OF THE FA. COASTAL FRONT IS JUST OFFSHORE EXCEPT IN SE NH WHERE IT HAS CREPT INLAND AND JUMPED TEMPS INTO THE LWR 30S. WILL BE UPDATING TO TOUCH UP THE FIRST PD. NO CHANGES FOR THE COASTAL WATERS.

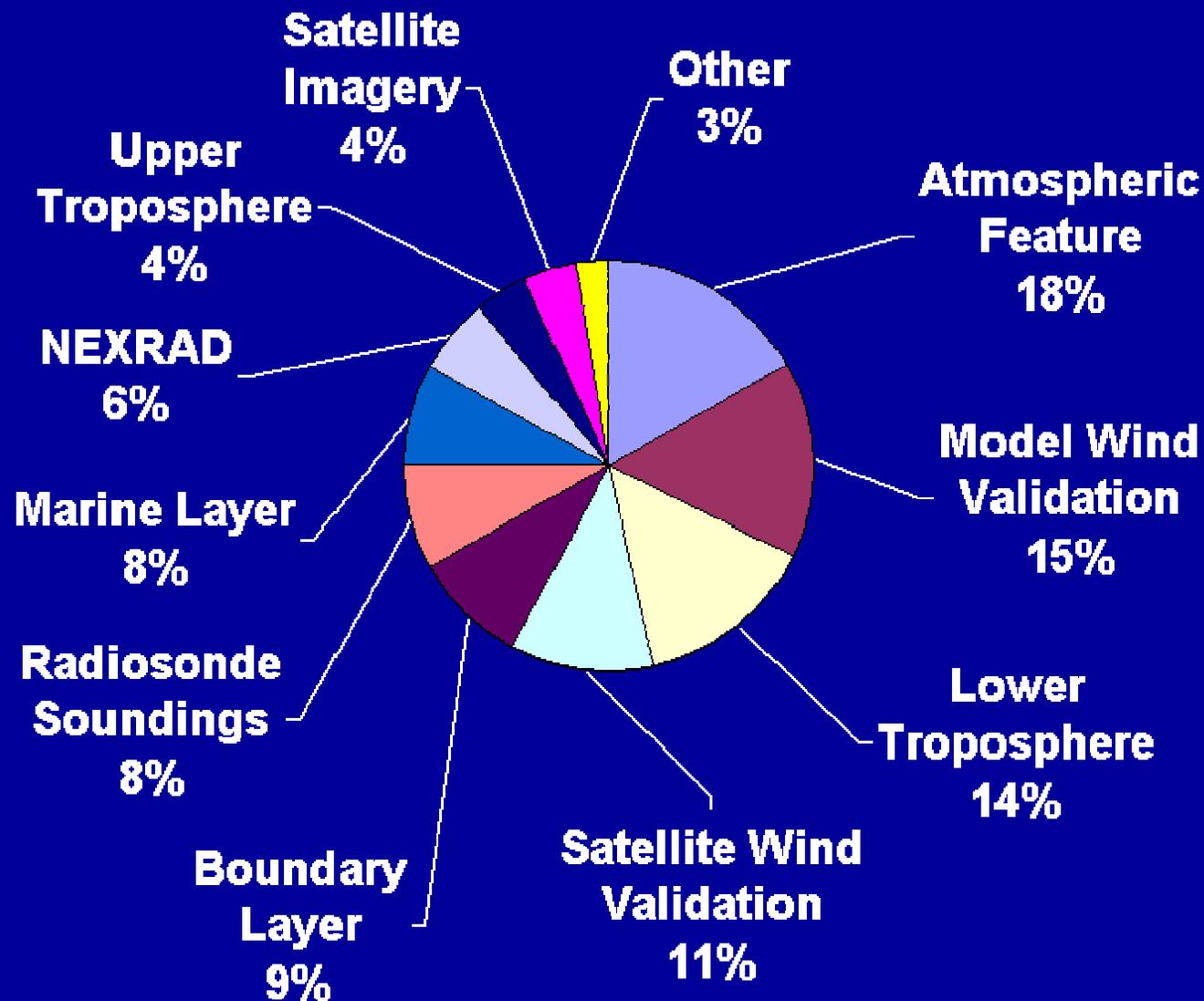
DISCUSSION...

MODELS STILL POINTING TOWARD A SIGNIFICANT WINTER WEATHER EVENT FOR THE FORECAST AREA...STARTING THIS EVENING AND LASTING INTO AT LEAST THE FIRST HALF OF MONDAY...BEFORE WINDING DOWN MONDAY AFTERNOON AND EARLY EVENING. BOTTOM LINE...NO CHANGE IN THE WARNINGS FOR TONIGHT AND MONDAY. BASED ON THE WARM AIR ADVECTION TO OUR SOUTH (STRONG VEERING ON THE **RUTGERS PROFILER IN NJ**)...THE SNOW SHOULD FALL HEAVILY AT TIMES NOT LONG AFTER STARTING. THIS SHOULD CONTINUE ACROSS THE REGION THROUGH 06Z OR SO. SNOWFALL RATES OF 2 OR 3 INCHES AN HOUR COULD DEVELOP IN THE STRONG WARMING. WHILE IT WON'T BE INCLUDED IN THE FORECAST...THUNDER AND LIGHTNING NOT OUT OF THE QUESTION.”

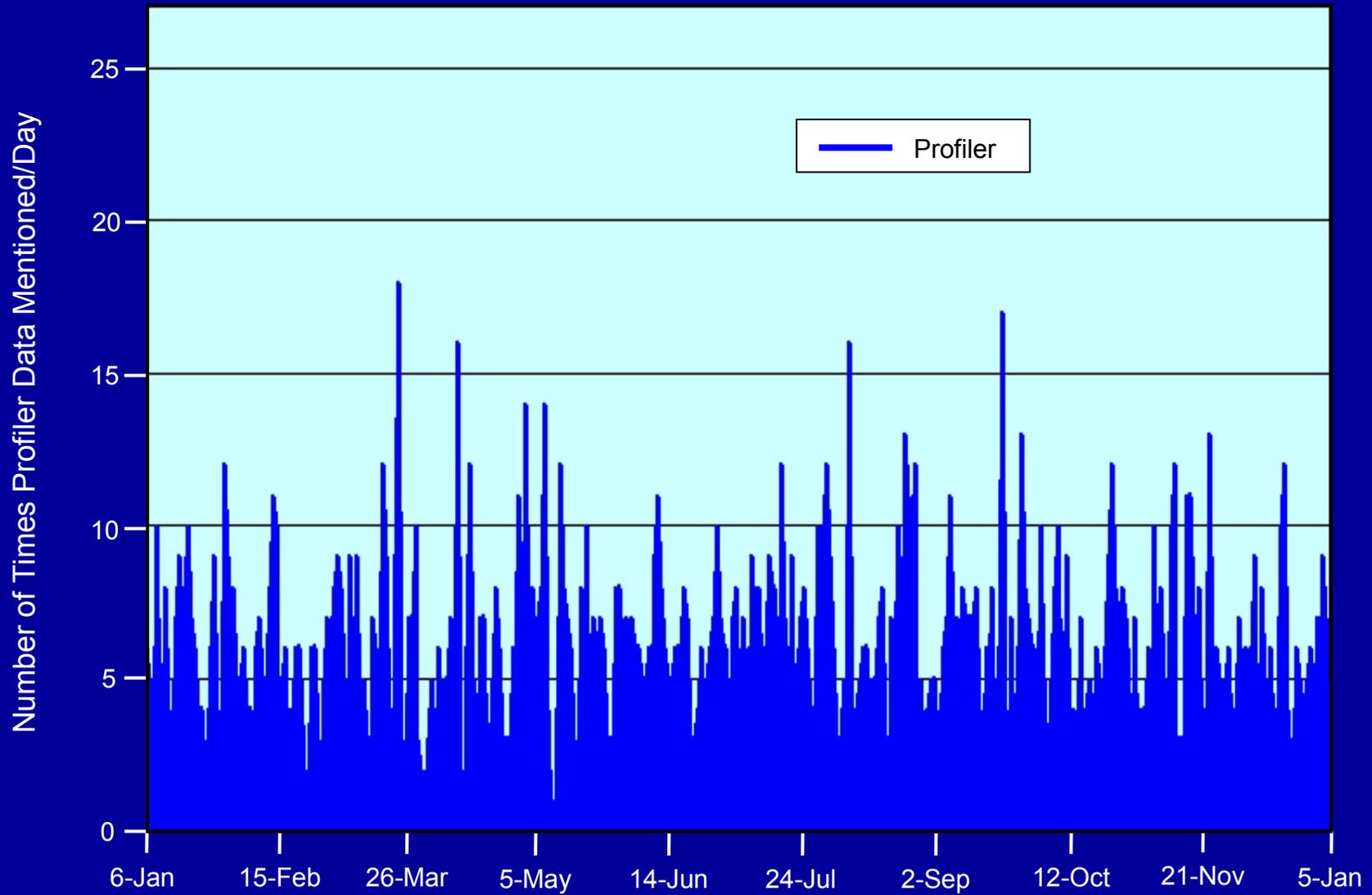




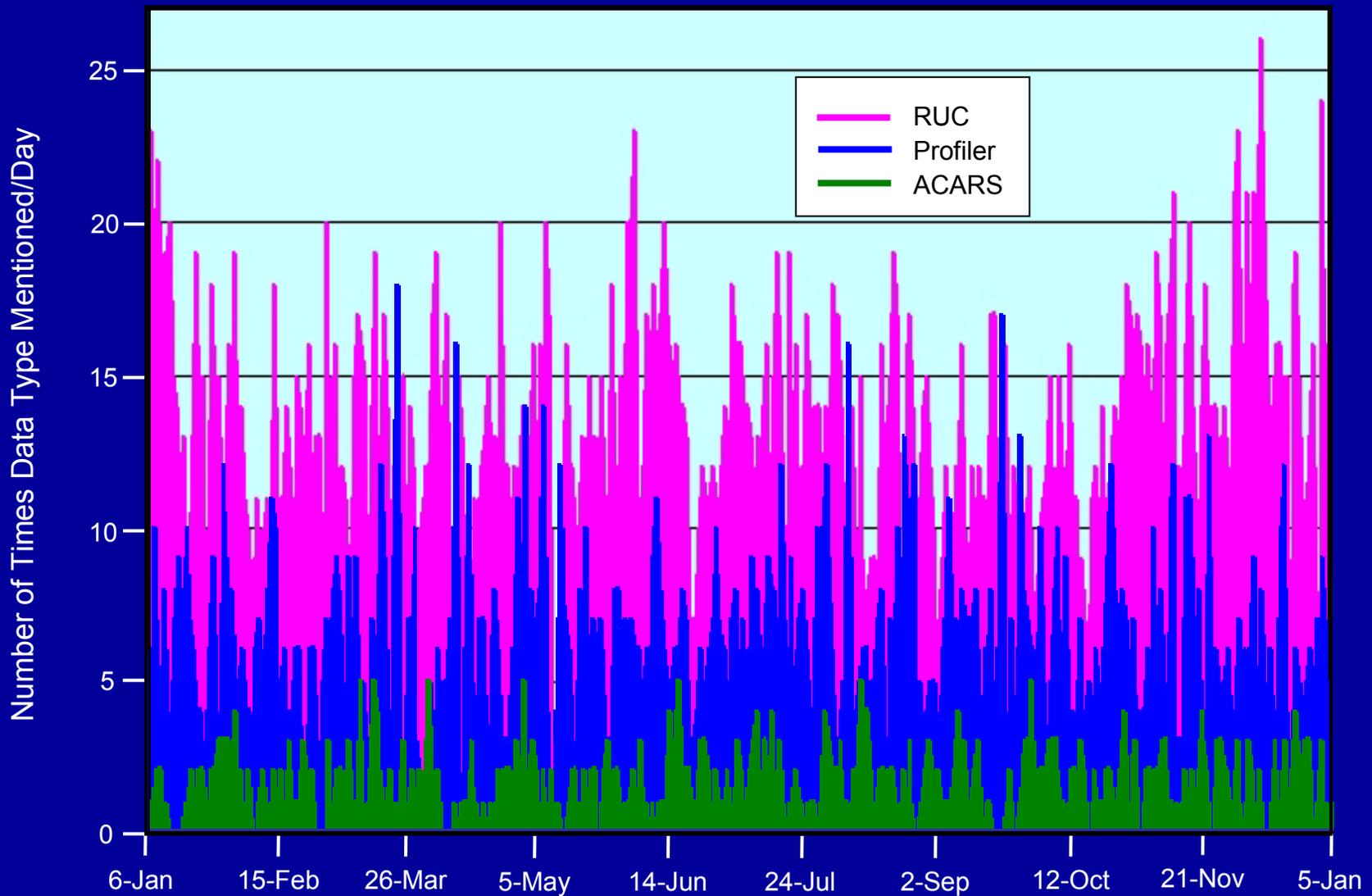
## Categories of Profiler Data Usage Identified from the Area Forecast Discussions



# Profiler data mentioned in AFDs Jan. 6, 2003 - Jan. 5, 2004



# Profiler, RUC, & ACARS data mentioned in AFDs Jan. 6, 2003 - Jan. 5, 2004



# Summary

- Identified the use of wind and temperature profiler data in NWS Area Forecast Discussions
- Categorized the use of profiler data in forecaster's decision making process
- Profiler data useful for general “situational awareness”, in addition to specific applications
- Data were found to be valuable and well integrated into routine operations at many NWS offices

